PATENT COOPERATION TREATY

PCT

TRANSLATION INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003P01872WO	FOR FURTHER ACTION	See Form PCT/IPEA/416						
International application No.	International filing date (day/month/year)	Priority date (day/month/year)						
PCT/EP2004/053355	08.12.2004	09.12.2003						
International Patent Classification (IPC) or nati	onal classification and IPC							
H02P7/63								
Applicant BSH BOSCH UND SIEMENS HAUSGERÄTE GMBH								
This report is the international prelin	minary examination report, established by this	International Preliminary Examining Authority						
under Article 35 and transmitted to the	e applicant according to Article 36.	, , ,						
2. This REPORT consists of a total of	5 sheets, includi	ng this cover sheet.						
3. This report is also accompanied by A	NNEXES, comprising:							
a. (sent to the applicant and	to the International Bureau) a total of 2	sheets, as follows:						
sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).								
sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental								
Box.								
b (sent to the International	Bureau only) a total of (indicate type and numb	er of electronic carrier(s))						
		, containing a sequence listing and/or tables						
related thereto, in computer Section 802 of the Administ	•	emental Box Relating to Sequence Listing (see						
This report contains indications relati	<u> </u>							
Box No. I Basis of the	-							
Box No. II Priority								
Box No. III Non-establi	shment of opinion with regard to novelty, inver	ntive step and industrial applicability						
Box No. IV Lack of uni	ty of invention							
Box No. VI Certain doc	uments cited							
Box No. VII Certain defo	ects in the international application							
Box No. VIII Certain obs	ervations on the international application							
Date of submission of the demand	Date of completion of t	his report						
		-						
Name and mailing address of the IPEA/EP	Authorized officer	Authorized officer						
Facsimile No.	Telephone No.							

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/053355

Box	No. I	I Basis of the report		
1.		th regard to the language, this report is based on the internation icated under this item.	al application in the language in	which it was filed, unless otherwise
		This report is based on translations from the original language which is the language of a translation furnished for the purposition international search (Rule 12.3 and 23.1(b)) publication of the international application (Rule 12.4) international preliminary examination (Rule 55.2 and/o	oses of:	,
2.	rece	th regard to the elements of the international application, this relation of the international application, this relation of the international application as originally filed/furnished the description:	report is based on (replacement s	
		pages 1-4 pages*		
		pages*	•	
	\square	the claims:	incorrect by time realization of	
		nos.		as originally filed/furnished
		nos.*	as amended (togethe	r with any statement) under Article 19
		nos.* 1-8	received by this Authority on	30.01.2006 with letter of 27.01.2006
		nos.*	received by this Authority on	
	\boxtimes	the drawings:		
		sheets 1/3-3/3		as originally filed/furnished
		sheets*	received by this Authority on	
		sheets*	received by this Authority on	
		a sequence listing and/or any related table(s) – see Suppleme	ental Box Relating to Sequence L	isting.
3.		The amendments have resulted in the cancellation of:		
		the description, pages		
		the claims, nos.		
		the sequence listing (specify):		
4.		This report has been established as if (some of) the amenda they have been considered to go beyond the disclosure as file	ments annexed to this report and	listed below had not been made, since
		the description, pages		
		the claims, nos.		
		the sequence listing (specify):		
		any table(s) related to sequence listing (specify):		
*	If ite	tem 4 applies, some or all of those sheets may be marked "supe	rseded."	

International application No.		
PCT/EP2004/053355		

				, , , , , , , , , , , , , , , , , , ,	
Box			ticle 35(2) with regard to novelty, inventive s	step or industrial applicability;	
	citations and	explanations sup	porting such statement		
1.	Statement				
	Novelty (N)	Claims	1-8	Y	ES
		Claims		N	О
	Inventive step (IS)	Claims	1-8	Y	ES
		Claims		N	О
	Industrial applicability (IA) Claims	1-8	Y	ES
		Claims		N	О
2.	Citations and explanations ((Rule 70.7)			

1. Reference is made to the following documents:

D1: EP-A-128 796

D2: US-A-4 259 620.

- 2. The application fails to satisfy the requirements of PCT Article 6 because claim 1 lacks clarity.
- 2.1 Claim 1 attempts to set forth the method in an unclear manner, referring to the three phases of the DC motor and not to the converter switch.

If reference is made only to the phase/windings of the motor, it is necessary also to take into account the effect of the freewheeling diodes, which always allows the winding current from a winding that is not connected by a switch to continue to flow, thereby also connecting the connectable end of said winding via the freewheeling diode to an input voltage.

The freewheeling diodes are not disclosed in the present application or in document D1. However,

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

said diodes are conventional and can be found in, for example, document D2.

If the subject matter of the claims is interpreted in this light, that is to say only with phases (that is to say windings) of the DC motor, either document D1 or document D2 appears to anticipate the novelty of claims of this type although, with regard to the converter switch, the method disclosed by the application is not rendered obvious by the prior art known from D1 and D2.

- in claim 1 appears to be that a switch is periodically opened and closed (see paragraph 018 and paragraph 020). However, periodically switching a switch on and off does not appear to signify, per se, that said phase "is switched" between the two input voltages. Only by taking into account the freewheeling current flowing through the non-disclosed recovery diodes, could the phase be understood "to be switched".
- 3. Document D1 is considered to be the prior art closest to the subject matter of claim 1 and differs from the known method in that a new switching state control system (see paragraphs 18 and 20 of the description) is used.

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement The subject matter of claim 1 (for example as 3.1 clarified in paragraphs 18 and 20 of the description) is therefore novel (PCT Article 33(2)). 3.2 The problem addressed by the present invention can consequently be regarded as that of improving the effectiveness of the system. 3.3 The solution to the above problem, as proposed in claim 1 of the present application, involves an inventive step (PCT Article 33(3)). The reasons are as follows: Since neither document D1 nor document D2 contains anything to indicate such a control system, the solution according to the present claim 1 is non-obvious, even if D1 is read in combination with D2. 3.4 Claims 2 to 8 are dependent on claim 1 and, in consequence, likewise satisfy the requirements of the PCT in respect of novelty and inventive step.